Gyanu Lamichhane

List of Publications by Year
in descending order

79 papers	4,137 citations	126907 33 h-index	123424 61 g-index
85 all docs	85 docs citations	85 times ranked	4344 citing authors

#	Article	IF	Citations
1	A postgenomic method for predicting essential genes at subsaturation levels of mutagenesis: Application to Mycobacterium tuberculosis. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 7213-7218.	7.1	346
2	Copper resistance is essential for virulence of <i>Mycobacterium tuberculosis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 1621-1626.	7.1	286
3	Dormancy Phenotype Displayed by Extracellular Mycobacterium tuberculosis within Artificial Granulomas in Mice. Journal of Experimental Medicine, 2004, 200, 647-657.	8.5	246
4	The Mycobacterium tuberculosis protein LdtMt2 is a nonclassical transpeptidase required for virulence and resistance to amoxicillin. Nature Medicine, 2010, 16, 466-469.	30.7	242
5	Cyclic AMP intoxication of macrophages by a Mycobacterium tuberculosis adenylate cyclase. Nature, 2009, 460, 98-102.	27.8	199
6	Genetic Requirements for the Survival of Tubercle Bacilli in Primates. Journal of Infectious Diseases, 2010, 201, 1743-1752.	4.0	159
7	Role of the <i>dosR</i> - <i>dosS</i> Two-Component Regulatory System in <i>Mycobacterium tuberculosis</i> Virulence in Three Animal Models. Infection and Immunity, 2009, 77, 1230-1237.	2.2	150
8	Designer Arrays for Defined Mutant Analysis To Detect Genes Essential for Survival of Mycobacterium tuberculosis in Mouse Lungs. Infection and Immunity, 2005, 73, 2533-2540.	2.2	139
9	Mycobacterium tuberculosisInvasion and Traversal across an In Vitro Human Bloodâ€Brain Barrier as a Pathogenic Mechanism for Central Nervous System Tuberculosis. Journal of Infectious Diseases, 2006, 193, 1287-1295.	4.0	132
10	Non-classical transpeptidases yield insight into new antibacterials. Nature Chemical Biology, 2017, 13, 54-61.	8.0	116
11	Carbapenems and Rifampin Exhibit Synergy against Mycobacterium tuberculosis and Mycobacterium abscessus. Antimicrobial Agents and Chemotherapy, 2015, 59, 6561-6567.	3.2	109
12	Inhibition of innate immune cytosolic surveillance by an M. tuberculosis phosphodiesterase. Nature Chemical Biology, 2017, 13, 210-217.	8.0	96
13	Targeting the Cell Wall of Mycobacterium tuberculosis: Structure and Mechanism of L,D-Transpeptidase 2. Structure, 2012, 20, 2103-2115.	3.3	94
14	Nonclassical Transpeptidases of Mycobacterium tuberculosis Alter Cell Size, Morphology, the Cytosolic Matrix, Protein Localization, Virulence, and Resistance to Î²-Lactams. Journal of Bacteriology, 2014, 196, 1394-1402.	2.2	80
15	Drug resistance mechanisms and novel drug targets for tuberculosis therapy. Journal of Genetics and Genomics, 2017, 44, 21-37.	3.9	77
16	Novel targets in M. tuberculosis: search for new drugs. Trends in Molecular Medicine, 2011, 17, 25-33.	6.7	67
17	Murine Model to Study the Invasion and Survival of<i>Mycobacterium tuberculosis</i>in the Central Nervous System. Journal of Infectious Diseases, 2008, 198, 1520-1528.	4.0	65
18	Substituted <i>N</i>-Phenyl-5-(2-(phenylamino)thiazol-4-yl)isoxazole-3-carboxamides Are Valuable Antitubercular Candidates that Evade Innate Efflux Machinery. Journal of Medicinal Chemistry, 2017, 60, 7108-7122.	6.4	64

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19	Bacterial Thymidine Kinase as a Non-Invasive Imaging Reporter for Mycobacterium tuberculosis in Live Animals. PLoS ONE, 2009, 4, e6297.	2.5	59
20	Essential Metabolites of Mycobacterium tuberculosis and Their Mimics. MBio, 2011, 2, e00301-10.	4.1	56
21	Methionine Aminopeptidases from Mycobacterium tuberculosis as Novel Antimycobacterial Targets. Chemistry and Biology, 2010, 17, 86-97.	6.0	55
22	Structural and functional features of enzymes of Mycobacterium tuberculosis peptidoglycan biosynthesis as targets for drug development. Tuberculosis, 2015, 95, 95-111.	1.9	54
23	Combinations of avibactam and carbapenems exhibit enhanced potencies against drug-resistant<i>Mycobacterium abscessus</i>. Future Microbiology, 2017, 12, 473-480.	2.0	54
24	Mycobacterium abscessus <scp>l</scp> , <scp>d</scp> -Transpeptidases Are Susceptible to Inactivation by Carbapenems and Cephalosporins but Not Penicillins. Antimicrobial Agents and Chemotherapy, 2017, 61, .	3.2	50
25	Deletion of aMycobacterium tuberculosisProteasomal ATPase Homologue Gene Produces a Slowâ€Growing Strain That Persists in Host Tissues. Journal of Infectious Diseases, 2006, 194, 1233-1240.	4.0	47
26	A screen for non-coding RNA in Mycobacterium tuberculosis reveals a cAMP-responsive RNA that is expressed during infection. Gene, 2012, 500, 85-92.	2.2	45
27	Loss of a Functionally and Structurally Distinct ld-Transpeptidase, LdtMt5, Compromises Cell Wall Integrity in Mycobacterium tuberculosis. Journal of Biological Chemistry, 2015, 290, 25670-25685.	3.4	45
28	<i>In Vitro</i> Activity of the New Î²-Lactamase Inhibitors Relebactam and Vaborbactam in Combination with Î²-Lactams against Mycobacterium abscessus Complex Clinical Isolates. Antimicrobial Agents and Chemotherapy, 2019, 63, .	3.2	45
29	Accelerated Detection ofMycobacterium tuberculosisGenes Essential for Bacterial Survival in Guinea Pigs, Compared with Mice. Journal of Infectious Diseases, 2007, 195, 1634-1642.	4.0	43
30	Structural insight into the inactivation of Mycobacterium tuberculosis non-classical transpeptidase LdtMt2 by biapenem and tebipenem. BMC Biochemistry, 2017, 18, 8.	4.4	42
31	Select Î²-Lactam Combinations Exhibit Synergy against <i>Mycobacterium abscessus In Vitro</i>. Antimicrobial Agents and Chemotherapy, 2019, 63, .	3.2	42
32	Mycolic acid methyltransferase, MmaA4, is necessary for thiacetazone susceptibility in <i>Mycobacterium tuberculosis</i>. Molecular Microbiology, 2009, 71, 1263-1277.	2.5	41
33	Computational model for the acylation step of the Î²-lactam ring: Potential application for l,d-transpeptidase 2 in mycobacterium tuberculosis. Journal of Molecular Structure, 2017, 1128, 94-102.	3.6	41
34	A mouse model of pulmonary Mycobacteroides abscessus infection. Scientific Reports, 2020, 10, 3690.	3.3	41
35	Definition and annotation of (myco)bacterial non-coding RNA. Tuberculosis, 2013, 93, 26-29.	1.9	36
36	Differential flap dynamics in <scp>l</scp>,<scp>d</scp>-transpeptidase2 from mycobacterium tuberculosis revealed by molecular dynamics. Molecular BioSystems, 2017, 13, 1223-1234.	2.9	36

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37	Mycobacterium abscessus and Î²-Lactams: Emerging Insights and Potential Opportunities. Frontiers in Microbiology, 2018, 9, 2273.	3.5	35
38	<i>N</i>-Trifluoromethylthiolated Sulfonimidamides and Sulfoximines: Anti-microbial, Anti-mycobacterial, and Cytotoxic Activity. ACS Medicinal Chemistry Letters, 2019, 10, 1457-1461.	2.8	31
39	Potency of Omadacycline against Mycobacteroides abscessus Clinical Isolates <i>In Vitro</i> and in a Mouse Model of Pulmonary Infection. Antimicrobial Agents and Chemotherapy, 2022, 66, AAC0170421.	3.2	31
40	Role of the Cys154Arg Substitution in Ribosomal Protein L3 in Oxazolidinone Resistance in Mycobacterium tuberculosis. Antimicrobial Agents and Chemotherapy, 2016, 60, 3202-3206.	3.2	30
41	In vitro and in vivo activity of biapenem against drug-susceptible and rifampicin-resistant Mycobacterium tuberculosis. Journal of Antimicrobial Chemotherapy, 2017, 72, 2320-2325.	3.0	30
42	Have we realized the full potential of Î²â€lactams for treating drugâ€resistant TB?. IUBMB Life, 2018, 70, 881-888.	3.4	30
43	Pyrazinoic Acid Inhibits a Bifunctional Enzyme in Mycobacterium tuberculosis. Antimicrobial Agents and Chemotherapy, 2017, 61, .	3.2	29
44	Synergistic Efficacy of Î²-Lactam Combinations against <i>Mycobacterium abscessus</i> Pulmonary Infection in Mice. Antimicrobial Agents and Chemotherapy, 2019, 63, .	3.2	29
45	Combining Cheminformatics Methods and Pathway Analysis to Identify Molecules with Whole-Cell Activity Against Mycobacterium Tuberculosis. Pharmaceutical Research, 2012, 29, 2115-2127.	3.5	28
46	A comparative modeling and molecular docking study on<i>Mycobacterium tuberculosis</i>targets involved in peptidoglycan biosynthesis. Journal of Biomolecular Structure and Dynamics, 2016, 34, 2399-2417.	3.5	23
47	Activities of Dual Combinations of Antibiotics Against Multidrug-Resistant Nontuberculous Mycobacteria Recovered from Patients with Cystic Fibrosis. Microbial Drug Resistance, 2018, 24, 1191-1197.	2.0	23
48	Mycobacterium Tuberculosis Response to Stress from Reactive Oxygen and Nitrogen Species. Frontiers in Microbiology, 2011, 2, 176.	3.5	21
49	Systems Biology-Based Identification of Mycobacterium tuberculosis Persistence Genes in Mouse Lungs. MBio, 2014, 5, .	4.1	21
50	Targeting the cell wall of<i>Mycobacterium tuberculosis</i>: a molecular modeling investigation of the interaction of imipenem and meropenem with<i>L</i>,<i>D</i>-transpeptidase 2. Journal of Biomolecular Structure and Dynamics, 2016, 34, 304-317.	3.5	18
51	Mutation in an Unannotated Protein Confers Carbapenem Resistance in Mycobacterium tuberculosis. Antimicrobial Agents and Chemotherapy, 2017, 61, .	3.2	17
52	Early Bactericidal Activity of Meropenem plus Clavulanate (with or without Rifampin) for Tuberculosis: The COMRADE Randomized, Phase 2A Clinical Trial. American Journal of Respiratory and Critical Care Medicine, 2022, 205, 1228-1235.	5.6	17
53	Î²-Lactam Combinations That Exhibit Synergy against Mycobacteroides abscessus Clinical Isolates. Antimicrobial Agents and Chemotherapy, 2021, 65, .	3.2	16
54	The Impact of Mouse Passaging of Mycobacterium tuberculosis Strains prior to Virulence Testing in the Mouse and Guinea Pig Aerosol Models. PLoS ONE, 2010, 5, e10289.	2.5	15

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55	Defining the 'survivasome' of Mycobacterium tuberculosis. Nature Medicine, 2007, 13, 280-282.	30.7	13
56	LdtMav2, a nonclassical transpeptidase and susceptibility ofMycobacterium aviumto carbapenems. Future Microbiology, 2017, 12, 595-607.	2.0	13
57	The catalytic role of water in the binding site of l,d-transpeptidase 2 within acylation mechanism: A QM/MM (ONIOM) modelling. Tuberculosis, 2018, 113, 222-230.	1.9	13
58	Identification of potent L,D-transpeptidase 5 inhibitors for Mycobacterium tuberculosis as potential anti-TB leads: virtual screening and molecular dynamics simulations. Journal of Molecular Modeling, 2019, 25, 328.	1.8	13
59	The Driving Force for the Acylation of Î² â€Lactam Antibiotics by L,Dâ€Transpeptidase 2: Quantum Mechanics/Molecular Mechanics (QM/MM) Study. ChemPhysChem, 2019, 20, 1126-1134.	2.1	13
60	Structure and Function of L,D- and D,D-Transpeptidase Family Enzymes from Mycobacterium tuberculosis. Current Medicinal Chemistry, 2020, 27, 3250-3267.	2.4	13
61	Penicillin Binding Proteins and Î²-Lactamases of Mycobacterium tuberculosis: Reexamination of the Historical Paradigm. MSphere, 2022, 7, e0003922.	2.9	13
62	Inhibition mechanism of L,D-transpeptidase 5 in presence of the Î²-lactams using ONIOM method. Journal of Molecular Graphics and Modelling, 2019, 87, 204-210.	2.4	12
63	An evolved oxazolidinone with selective potency against Mycobacterium tuberculosis and gram positive bacteria. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 3572-3576.	2.2	11
64	Development of a penem antibiotic against Mycobacteroides abscessus. Communications Biology, 2020, 3, 741.	4.4	11
65	Protective Efficacy of BCG Overexpressing an L,D-Transpeptidase against M. tuberculosis Infection. PLoS ONE, 2010, 5, e13773.	2.5	10
66	Molecular insight on the non-covalent interactions between carbapenems and l,d-transpeptidase 2 from Mycobacterium tuberculosis: ONIOM study. Journal of Computer-Aided Molecular Design, 2018, 32, 687-701.	2.9	10
67	REMap: Operon map of M.Âtuberculosis based on RNA sequence data. Tuberculosis, 2016, 99, 70-80.	1.9	8
68	T405, a New Penem, Exhibits <i>In Vivo</i> Efficacy against M. abscessus and Synergy with Î²-Lactams Imipenem and Cefditoren. Antimicrobial Agents and Chemotherapy, 2022, 66, .	3.2	8
69	Immunogenicity without Efficacy of an Adenoviral Tuberculosis Vaccine in a Stringent Mouse Model for Immunotherapy during Treatment. PLoS ONE, 2015, 10, e0127907.	2.5	7
70	Inhibition of <i>Mycobacterium tuberculosis</i> L,Dâ€Transpeptidase 5â€‰by Carbapenems: MD and QM/MM Mechanistic Studies. ChemistrySelect, 2018, 3, 13603-13612.	1.5	6
71	Peptidoglycan compositional analysis of Mycobacterium smegmatis using high-resolution LCâ€“MS. Scientific Reports, 2022, 12, .	3.3	6
72	Glby, Encoded by <i>MAB_3167c</i> , Is Required for <i>In Vivo</i> Growth of Mycobacteroides abscessus and Exhibits Mild Î²-Lactamase Activity. Journal of Bacteriology, 2022, , e0004622.	2.2	3

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73	Assessment of carbapenems in a mouse model of Mycobacterium tuberculosis infection. PLoS ONE, 2021, 16, e0249841.	2.5	2
74	Compromised longevity due to Mycobacterium abscessus pulmonary disease in lungs scarred by tuberculosis. Access Microbiology, 2019, 1, e000003.	0.5	2
75	803. Overcoming Î²-Lactam Resistance in Mycobacterium abscessus. Open Forum Infectious Diseases, 2018, 5, S288-S288.	0.9	1
76	Mechanistic insight on the inhibition of D, D-carboxypeptidase from <i>Mycobacterium tuberculosis</i> by <i>Î²</i>-lactam antibiotics: an ONIOM acylation study. Journal of Biomolecular Structure and Dynamics, 2022, 40, 7645-7655.	3.5	1
77	Repurposing of Carbapenems for the Treatment of Drug-Resistant Tuberculosis. , 2019, , 497-514.		1
78	Allosteric cooperation in Î²-lactam binding to a non-classical transpeptidase. ELife, 2022, 11, .	6.0	1
79	Emerging Therapies. , 2017, , 191-218.		0